REMARKS

The claims have not been amended. Accordingly, claims 1-12 are currently pending in the application, of which claim 1 is an independent claim.

Applicants respectfully request reconsideration and timely withdrawal of the pending objections and rejections for the reasons discussed below.

Rejections Under 35 U.S.C. § 102

Claims 1-4 and 9-11 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Japanese Patent Application Publication No. 11-273731 applied for by Naoki ("Naoki"). Applicants respectfully traverse the Examiner's rejections for at least the following reasons.

In order for a rejection under 35 U.S.C. § 102(b) to be proper, a single reference must disclose every claimed feature. To be patentable, a claim need only recite a single novel feature that is not disclosed in the cited reference. Thus, the failure of a cited reference to disclose one or more claimed features renders the 35 U.S.C. § 102(b) rejection improper.

Claim 1 recites, *inter alia*:

> wherein the linear polymer having P=O bonds is present in an amount ranging from about 0.005 to <u>less than 5 wt%</u> based on the total amount of the electrolyte. (*emphasis added*)

Applicants respectfully submit that Naoki fails to disclose at least such features. Rather, Naoki discloses a polymer phosphoric ester occupying 5-20% by volume (paragraph [0026]). The Examiner notes that the density of most materials is about 1 g/ml and thus volume% is approximately weight%. The Examiner further cites MPEP §2131.03, stating that prior art which teaches a range <u>overlapping or touching</u> the claimed range anticipates if the prior art ranges disclose the range with "sufficient specificity" (Office Action on page 3). Applicants respectfully

submit that the Examiner fails to demonstrate that the prior art range discloses the claimed range with "sufficient specificity" (MPEP §2131.03(II)). The range of 5-20% by volume disclosed by Naoki fails to overlap or touch the claimed range of the linear polymer having P=O bonds of about 0.005 to less than 5 wt% recited in claim 1. Therefore, Naoki fails to anticipate the claimed features recited in claim 1.

Further, Applicants respectfully submit that the Examiner fails to establish a prima facie case of obviousness. MPEP §2144.05(II)(A) states that "differences in concentration and temperature will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating that such concentration or temperature is critical. Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation" *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955), *Peterson*, 315 F.3d at 1330 65 USPQ 2d at 1382 ("The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages.").

Applicants respectfully submit that the claimed range recited in claim 1 is not an optimum or workable range discovered by routine experimentation within a generally known or disclosed set of ranges or values. Applicants' response filed November 14, 2006, presented the criticality of the claimed range for which the Examiner has failed to address. In Applicants' response filed November 14, 2006, Applicants stated:

> The specification states at page 9, lines 4-9:
>
> The linear polymer having P=O bonds is preferably present in an amount ranging from about 0.005 to about 5 wt% based on the total amount of the electrolyte. The preferable effect of the linear polymer is not likely to occur when the polymer is present in an amount of less than about 0.005 wt%, and battery performance such as capacity characteristics deteriorates when the polymer exists in an amount exceeding 5 wt%.

Further, Applicants respectfully submit that the Examiner fails to demonstrate that, although the claimed range and the prior art range do not overlap, the ranges are close enough that one skilled in the art would have expected them to have the same properties (Office Action on page 4). In *Titanium Metals Corp. of America v. Banner* ("*Titanium*"), the Federal Circuit held that two compositions were so close that one of ordinary skill in the art would have expected the two compositions to have the same properties. The claimed composition had 0.3% Mo, 0.8% Ni, and a balance of titanium, whereas the prior art compositions had 0.25% Mo and 0.75% Ni, and 0.31% Mo and 0.69% Ni, respectively (778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985)). Applicants respectfully submit that *Titanium* fails to support the Examiner's rejections of Applicant's claimed range in view of the disclosed range of Naoki. Applicants have demonstrated that the claimed range recited in claim 1 and the range disclosed in Naoki do not overlap or touch, demonstrated the criticality of Applicant's claimed range, and distinguished Applicant's claimed range from Naoki's range by demonstrating that Naoki's range would cause deterioration of battery performance. Therefore, although an end point of one range and a starting point of another are close to one another, the two ranges do not possess the same properties.

Accordingly, Naoki fails to teach or suggest every claimed feature of claim 1.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 102(b) rejection of claim 1. Claims 2-4 and 9-11 depend from claim 1 and are allowable at least for this reason. Since none of the other prior art of record discloses or suggests all the features of the claimed invention, Applicants respectfully submit that independent claim 1, and all the claims that depend therefrom, are allowable.

Rejections Under 35 U.S.C. § 103

Claim 12

Claim 12 stands rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Naoki in view of U.S. Patent Application Publication No. 2002-0177027 applied for by Yeager ("Yeager").

Applicants respectfully submit that claim 1 is allowable over Naoki and Yeager fails to cure the deficiencies of Naoki noted above with regard to claim 1. Hence, claim 12 is allowable at least because it depends from an allowable claim 1.

Claims 1 and 5-8

Claims 1 and 5-8 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Naoki in view of U.S. Patent No. 6,645,671 applied for by Tsutsumi ("Tsutsumi").

Applicants respectfully submit that claim 1 is allowable over Naoki and Tsutsumi fails to cure the deficiencies of Naoki noted above with regard to claim 1. Hence, claims 5-8 are allowable at least because they depend from an allowable claim 1.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. § 103(a) rejection of claim 1. Claims 5-8 and 12 depend from claim 1 and are allowable at least for this reason. Since none of the other prior art of record discloses or suggests all the features of the claimed invention, Applicants respectfully submit that independent claim 1, and all the claims that depend therefrom, are allowable.

CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the grounds for rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

/hae-chan park/

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